

gresses, forms the entire vascular system; and 4, the saccus vittelinus of Haller, which constitutes the amorphous rudiment of the alimentary canal. Upon the spongy membrane which forms the vascular system, become ingrafted the first traces of the nervous system, after the cicatricula become fecundated by the semen of the male. These parts soon become more conspicuous; vessels gradually make their appearance, and are at first seen communicating freely with each other. From these, arteries and veins are given off, which, influenced by the rudimentary nervous system, finally form the left auricle and ventricle of the heart, which are developed before the right cavities of that organ. While these changes are taking place in the spongy membrane, the intestines are formed by the saccus vittelinus. These sentiments are at variance with those of Malpighi and Haller, who, our author affirms, fell into the additional error of confounding the ganglions of the great sympathetic nerve with the rudiments of the vertebra.

But to return to the work under consideration, we have only to state, that though the descriptions are brief, they are generally sufficiently minute to prepare the student for the just appreciation of the functions, and that they are drawn up with clearness and accuracy. As the principal object of the author was merely to supply students with the general principles of physiological anatomy, he has refrained from entering into any minute details, and in doing so, he has furnished the junior part of the profession with a work, from which we have no hesitation in saying, they will derive much valuable instruction.

E. G.

XIX. *Anthropogénèse ou Génération de l'Homme, avec des vues de Comparaison sur les Reproductions des trois règnes de la Nature, et des Recherches sur la Conservation des Espèces et des Races, les ressemblances sexuelles des autres, le Croisement des Races, les Causes de la Fécondité, de la Stérilité, de l'Empuissance et sur d'autres Phénomènes des Revivifications Naturelles.* Par J. B. DEMANGEON, M. D. &c. &c. Paris, 1829. pp. 346. 8vo.

In investigating the intricate subject of generation, M. Démangeon has not been content with treating of its phenomena in man alone, but has extended his researches into the three kingdoms of nature, and from a comparison of different modes adopted by nature for the reproduction and perpetuation of her works, has endeavoured to establish a theory of generation founded on what takes place, instead of on assumed facts, and oftentimes extravagant assertions. He has not, however, been satisfied with this ample field, but has pursued the subject in its relations with practical medicine and with jurisprudence. We do not think he has been altogether successful in this undertaking, though he has certainly presented the world with a work abounding in new views, which may lead to ulterior investigations, and finally tend to establish this doubtful and contested subject on a settled and fixed basis.

From the nature of the work it is impossible for us to do more at the present time than to lay before our readers an analysis of its contents, with some very cursory observations on a few of the topics he has discussed. The first chapter is on generation in those species in which there is a known difference of sex. The author here takes a rapid view of the reproductive process in the vegeta-

ble and animal kingdoms, making this distinction between them, "that sexuality is only a temporary phenomenon in vegetables, whilst in animals it is constant, forming in fact a property of their organization." Dr. Demangeon appears to think that *omne vivens ex ovo*, though he acknowledges that this theory will not solve all the problems which arise from the subject of generation. Chapter second is devoted to the consideration of generation in species in which the sex is unknown, or, in other words, of what has been termed equivocal generation. The author's ideas on this disputed point are very ingenious; he refuses any credit to a majority of the instances which have been adduced in proof of the truth of this doctrine, still he does admit that it may take place in certain imperfectly organized bodies, as hydatids, concrevæ, &c. Chapter third treats of generation in intestinal worms. This is in truth a continuation of the preceding chapter, in which the author appears to be almost inclined to admit the fact of spontaneous generation among these animals. Chapter fourth is on the perpetuation of species, races, and resemblances by manifest sexual vivifications. These resemblances the author thinks that he has proved to depend on a relative superiority of vigor, or in the more mature age of one or other of the parents. This chapter is extremely interesting, and replete with curious facts. Chapter fifth, on the first synthesis and evolution of the embryo, is filled with hypotheses and conjectures, which are any thing but satisfactory; the author seems to have given his imagination full sway without reference to reason or facts. The next chapter, however, which is devoted to a brief exposition of the different theories of generation, contains much important matter. Chapter seventh, on the capacity for generation, and the product of the sexual secretion in males, with the hygienic causes of fecundity, in general affords many interesting data for the medico-jurist as well as for the physiologist. Chapter eighth treats of the product of the sexual secretion in females, and of their fecundation. This chapter is very unsatisfactory, and the author at last refers to Hippocrates, as giving the best account of the first formation of man. The ninth chapter, on sterility and impotence, is deserving of attention, on account of its medico-legal bearings. The author makes a clear distinction between these two states, which have been too often confounded. "Fecundity in the female is her aptitude to become a mother, and in man, the aptitude of rendering a woman fruitful. The opposite state in either sex is sterility." Impotence he defines as an impossibility of either sex to exercise the genital functions. These distinctions become extremely important as relates to questions of rape, divorce, legitimacy, &c. These states not only differ in their causes, but also in their bearings and curability. As regards hermaphroditism, which is the subject of the tenth chapter, the author is very decided in his opinion, that it never takes place in the human race, all the cases of alleged double sex being anomalous and monstrous productions, which, although presenting an appearance of an union of the male and female organs, were in reality but deformities, and that there never was an instance in which the double faculty of engendering and conceiving were concentrated in the same individual. Dr. Demangeon cites a number of very extraordinary cases, which appear to be well authenticated, where the apparent union of the sexes was perfect, though strictly and physiologically speaking, the unfortunate victim of them really appertained to one or the other. Chapter eleventh is on superfetation, or where a *fœtus* is conceived

whilst the uterus is occupied by the product of a former impregnation. This subject, which has given rise to numerous and bitter controversies, is by no means placed on its proper basis even at the present day; our author seems willing to deny its possibility, referring all the cases to twins of the same conception, but born at different epochs; in this, however, his previous theories have blinded him to the multitude of well-authenticated cases, in which there can be no doubt of the reality of this process. That many of the cases which have been referred to superfetation, were in fact cases of twins, must be admitted, but we have also a host of instances in which such an explanation is impossible; some of these are given in the former numbers of this Journal. Neither can we refer them in every case to the existence of a bilobate uterus, though it is probable that this malformation occurs in a generality of them. Chapter twelfth, with which the work concludes, is devoted to the consideration of the term of gestation and its anomalies. This contains nothing new as respects the human species, notwithstanding the great importance of the subject, but the author has collected some interesting facts in relation to the variations to which it is liable among our domestic animals. R. E. G.

XX. *Darstellung blutiger heilkünstlerischer Operationen, als Leit faden zu seinen Academischen Vorlesungen und für operirende Heilkünstler, bearbeitet.* Von CHRISTOPH. BONIFACIUS ZANG, der Chirurgie und Medicin Doctor, Sr. k. k. apost. Majestät Rathe, ordentlichem öffentlichem Lehrer der Chirurgie, &c. Ester band, Dritte Auflage, Wien, 1823. Zweyter Band, 1824. Dritter, vierter, und fünfter Band, 1818-19-21. Mit kupfertafeln, &c.

*Treatise on Surgical Operations, designed as a text book for the author's Academic Lectures, &c.* By CHRISTOPHER BONIFACE ZANG, Doct. of Surgery and Medicine, &c. 5 vols. Vienna, 1823-24.

We have been much gratified with the perusal of this treatise on surgical operations, and regret that we shall be obliged, for the present, to confine ourselves to a mere annunciation of its contents. It has been so well received in Germany, that the two first volumes have already passed through three editions since 1812, the date of their first publication.

The author commences with the consideration of the minor surgical operations, (*Petit Chirurgie* of the French,) as scarifications, the application of cups and leeches, venesection, arteriotomy, &c. These different topics are treated with all necessary minuteness of detail; the indications which call for the several operations, the circumstances which render them improper; the necessary apparatus, the disposition of the assistants, the position of the patient, the several arts of the operation, together with the after-treatment, being all particularly considered. We have next, an exposition of the several operations for aneurism, and for securing wounded arteries. The rules to be observed in these operations, are laid down with much clearness and precision, and the plans recommended are, for the most part, those which comport best with the anatomy of the parts concerned. The remainder of the first volume is taken up in the description of the operations for varicose veins, opening of abscesses, the extirpation of tumours, the application of cauteries, extirpation of polypi, &c.